

TACHINID PARASITES OF *HELIOTHIS* IN THE WESTERN
HEMISPHERE (DIPTERA; LEPIDOPTERA)

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Abstract.—Search of the literature and personal records of identifications yielded a total of 61 species of Tachinidae recorded from *Heliothis* in the Western Hemisphere, plus 3 species recently introduced from India but not yet known to be established. The table includes the geographic region, the species of *Heliothis* involved (*H. zea*, *H. virescens*, “others, or sp.”), and a brief summary of the known host relationships of the tachinids. Many of the species are uncommon, or at least rarely reared. Almost all the common species are polyphagous, especially on Noctuidae.

I present here a preliminary list of tachinid flies known to parasitize species of the noctuid genus *Heliothis* in the Western Hemisphere. It is probably complete for the major parasites because much attention has been and is being given to parasites of *Heliothis*, but minor, occasional, aberrant, or rare species of parasites will undoubtedly be added in the future. The present list is based on card catalogs in the Systematic Entomology Laboratory, my personal records of identifications, the manuscript of “A Host-Parasite Catalog of North American Tachinidae” by Paul H. Arnaud, Jr., soon to be published by the U.S. Department of Agriculture, and the recently published “Host-Parasite and Parasite-Host Catalogue of South American Tachinidae (Diptera)” by J. H. Guimaraes (1977, Arq. Zool. Sao Paulo, 28(3):1-131). For commonly reared species, host relations are summarized from the available information. Many of the tachinids are uncommon or at least rarely reared. Almost all of the common species are polyphagous, especially on Noctuidae.

Abbreviations: NA = North America, SA = South America, WI = West Indies; * = personal identification; ** = both personal identification and published records.

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Table 1.

Geog. region	Species of tachinid	<i>Heliothis</i>			Host relations and notes
		<i>zea</i>	<i>virescens</i>	others, or sp.	
SA	<i>Actinoplagia koehleri</i> Blanch.	x(**)		<i>H. gelotopocus</i> and spp.	Argentina, Chile, Uruguay; recorded only from <i>Heliothis</i> .
SA	<i>Arcluytas incertus</i> (Macq.)	x	x	<i>H. gelotopocus</i> and spp. (*)	Argentina, Brazil, Uruguay; recorded from 5 noctuid genera, an arctiid, and a pierid.
NA, WI, SA	<i>A. marmoratus</i> (Tns.)	x(**)	x(**)	<i>H. sp.</i> (n. Chile)	Polyphagous, Noctuidae; many published records.
SA	<i>A. platonicus</i> Cortés & Campos	x			1 record, Peru.
SA	<i>A. scutellatus</i> (Macq.)	x			Chile; recorded from 2 noctuids.
SA	<i>Ateloglutis chilensis</i> (Brèthes)	x		<i>H. spp.</i>	Chile.
NA	<i>Athanasius californicus</i> (Coq.)			<i>H. ononis</i>	Rare sp., 1 record, v. Canada.
NA	<i>Athrycia cinerea</i> (Coq.)	x(*)			Parasitic chiefly on <i>Pseudaletia unipuncta</i> .
NA	<i>Bonnetia comta</i> (Fall.)	x(*)			Polyphagous on noctuids.
	<i>Carcelia illota</i> (Curran)	x(lab.)	x(lab.)		First described, Africa; introduced USA from India; released Ga., Ariz.
SA	<i>Celatoriposis eucelatorioides</i> Blanch.			<i>H. gelotopocus</i>	1 record, Argentina.
SA	<i>Chaetocnephala americana</i> (Schin.)			<i>H. spp.</i>	Argentina, Chile.
NA	<i>Chaetogaedia analis</i> (Wulp)	x			3 published records, 1 each from Arctiidae, Geometridae, Noctuidae.
NA	<i>C. sp. near analis</i>			<i>H. spp.</i>	1 record, Ariz.
SA	<i>C. aurata</i> Blanch.			<i>H. gelotopocus</i>	1 record, Argentina.
NA	<i>C. monticola</i> (Bigot)	x(**)	x		Highly polyphagous, chiefly Noctuidae; Hawaii on <i>virescens</i> .

Table 1. Continued.

Geog. region	Species of tachimid	<i>Haliothis</i>			Host relations and notes
		<i>zea</i>	<i>virescens</i>	others, or sp.	
NA	<i>Compsilura concinnata</i> (Mg.)	x(*)			Highly polyphagous; 1 on <i>zea</i> , N.J.
NA	<i>Eucelatoria armigera</i> (Coq.)	x(**)		<i>H. hawaiiensis</i>	Polyphagous, chiefly Noctuidae; many publ. records on <i>zea</i> , some confused with sp. near <i>armigera</i> .
NA	<i>E. sp. near armigera</i>	x(**)	x(*)	<i>H. philoxiphagans</i> (lab.)	Polyphagous, chiefly Noctuidae; Tex. and Ariz. records.
SA	<i>E. australis</i> Tns.	x	x	<i>H. spp.</i> (Chile) (*)	Cuba and P.R. records chiefly on <i>Leucania latinscula</i> ; on <i>H. virescens</i> in Peru, on <i>zea</i> in Chile.
NA	<i>E. n. sp.</i>	x(*)			Mexico.
NA	<i>E. rubentis</i> (Coq.)	x(*)	x(or <i>zea</i> ?) (*)		Few records, chiefly on army-worms.
NA	<i>Eusisyropa blanda</i> (Coq.)	x(*)			Highly polyphagous; 1 record on <i>zea</i> , Del.
NA	<i>Exorista mella</i> (Walk.) <i>E. xanthaspis</i> (Wied.)	x	x		Polyphagous. Palearctic species; introduced from India as <i>E. fallax</i> ; released Ca.
SA	<i>Gonia pallens</i> Wd.			<i>H. spp.</i>	Chile; recorded from 2 other genera of noctuids.
NA	<i>Gonia sp. or spp.</i>	x			<i>Gonia</i> species are polyphagous, almost entirely on Noctuidae; 2 records on <i>zea</i> , Tex. and Calif.

Table 1. Continued.

Geog. region	Species of tachinid	<i>Heliothis</i>			Host relations and notes
		<i>zea</i>	<i>virescens</i>	others, or sp.	
WI	<i>Gynnochaetopsis fulvicanda</i> (Walton)	x			Chiefly par. of the noctuid <i>Mocis repanda</i> , in P.R. and Jamaica; 1 record on <i>zea</i> , Jamaica.
NA	<i>Hyphantrophaga luyphantriae</i> (Tns.)	x			Highly polyphagous, only 2 noctuids; 1 record on <i>zea</i> , Tex., 1905.
SA	<i>Incauyia charlini</i> Cortés	x			Chile.
SA	<i>I. chilensis</i> Ald.			<i>H. gelotopocus</i> and spp.	Polyphagous, chiefly on Noctuidae; Argentina, Chile.
SA	<i>I. spinicosta</i> Ald.	x		<i>H. spp.</i>	Argentina, Chile.
NA	<i>Leschenaultia adusta</i> (L.w.)	x(lab.)			Polyphagous, chiefly on Arctiidae; on <i>zea</i> , lab. Ariz.
NA	<i>Lespesia aletiae</i> (Riley)	x(**)	x(*)		Highly polyphagous; common on <i>Heliothis</i> ; many publ. records.
NA	<i>L. archippivora</i> (Riley)	x(**)		<i>H. hawaiiensis</i>	Highly polyphagous; many publ. records.
NA	<i>L. frenchii</i> (Will.)	x			Highly polyphagous; only 3 records on <i>zea</i> .
SA	<i>L. nimia</i> Cortés & Campos			<i>H. sp.</i>	1 record, Chile.
SA	<i>L. rufonaculata</i> (Blanch.)			<i>H. gelotopocus</i>	1 record, Argentina.
NA	<i>Metaplagia occidentalis</i> Coq.	x	x		Few records; 4 on <i>Heliothis</i> , 2 on Sphingidae.
NA	<i>Metavoria orientalis</i> Tns.	x(*)			Few records, and those on Sphingidae (<i>Manduca</i>).

Table 1. Continued.

Geog. region	Species of tachinid	<i>Heliothis</i>			Host relations and notes
		<i>zea</i>	<i>citriseana</i>	others, or sp.	
SA	<i>Myiosturmia mixta</i> Tns.		x		Brazil; also recorded from <i>Mocis latipes</i> .
NA, WI	<i>Neumonilla pyste</i> (Walk.)	x			Highly polyphagous, especially on Microlepidoptera. One record on <i>zea</i> , Virgin Islands.
	<i>Pallexorista laxa</i> (Curran)	x(**) (lab.)	x(*) (lab.)		First described, Africa; introduced USA from India; released Ca., Ariz.
SA	<i>Patelloa similis</i> (Tns.)			<i>H. gelotopocus</i>	Polyphagous on Noctuidae; ex <i>Heliothis</i> in Argentina.
SA	<i>Peleteria pygmaea</i> (Macq.)	x		<i>H. spp.</i>	Argentina, Brazil, Chile; recorded from 2 noctuid genera.
NA	<i>Phyxe pecosensis</i> (Tns.)			<i>H. philoxiphagus</i>	Polyphagous; <i>Heliothis</i> record in Wash.
NA	<i>P. vulgaris</i> (Fall.)			<i>H. philoxiphagus</i>	Polyphagous; <i>Heliothis</i> record in Wash.
NA	<i>Plagionina cognata</i> Ald.			<i>H. spp.</i>	1 record, Ariz.
NA	<i>P. spinosula</i> (Bigot)	x(*)		<i>H. spp. (**)</i>	1 record, Okla.
SA	<i>Protipphaenya townsendi</i> Blanch.			<i>H. gelotopocus</i>	Argentina; recorded from 2 noctuid genera.
NA	<i>Siphona plusiae</i> Coq.	x(*)			Few records, mostly Noctuidae; my det. from Calif.
SA	<i>Spogostia caridei</i> (Brèthes)			<i>H. gelotopocus</i>	Polyphagous, on at least 6 families.

Table 1. Continued.

Geog. region	Species of tachinid	<i>Heliothis</i>			Host relations and notes
		<i>zeca</i>	<i>virescens</i>	others, or sp.	
NA	<i>S. claripennis</i> (Macq.) (<i>Euphorocera</i> of Catalog)	x	x		Highly polyphagous.
NA	<i>S. floridensis</i> (Tns.)	x(**)	x(*)		Highly polyphagous; on numerous families.
SA	<i>S. "floridensis</i> (Tns.)"			<i>H.</i> spp.	Polyphagous on several families.
NA	<i>S. omissa</i> (Rein.)	x		<i>H.</i> spp.	Few records (3 of 5 are Noctuidae); "spp." Okla.
SA	<i>S. peruviana</i> (Tns.)		x		From 2 genera of noctuids; Peru.
NA	<i>S. tachinomoides</i> (Tns.)	x(*)		<i>H.</i> spp.	"spp." Okla.
NA	<i>Voria ruralis</i> (Fall.)	x			Polyphagous on Noctuidae; normally par. on <i>Trichoplusia ni</i> ; <i>zeca</i> record, Okla.
SA	<i>Winthemia ignobilis</i> (Wulp)			<i>H.</i> spp.	Chile.
NA	<i>W. quadripustulata</i> (F.), of North American authors				Highly polyphagous, commonly on Noctuidae; many publ. records.
NA	<i>W. rufopicta</i> (Bigot)	x(**)	x(*)		Highly polyphagous, especially on Noctuidae; common sp.
NA	<i>W. sinuata</i> Rein.			<i>zeca</i> or <i>virescens</i> (*)	Polyphagous; common.
NA	<i>W.</i> sp. (? <i>occidentis</i> Rein.)	x(*)			Del.